P153
Chrysene adsorption on a Portuguese loamy sand soil

A. Schneider Teixeira[1], *B. Fonseca*[1], *M. R. Peralba*[2], *T. Tavares*[1];
[1]*IBB-Institute for Biotechnology and Bioengineering, Braga, Portugal,* [2]*Institute for Chemistry, UFRGS, Porto Alegre, Brazil.*

Leaking of diesel oil from gas stations is frequent in Europe, as well as in other parts of the world. The presence of polycyclic aromatic hydrocarbons (PAHs), which are highly toxic, is an indication of contamination by heavy hydrocarbons from diesel oil. The main goal of this work is the determination of the distribution coefficient (K_d) of chrysene (the most carcinogenic of the PAHs) in loamy sand soil from Póvoa de Varzim, in the north of Portugal, using the sorption isotherm batch tests. The sorption isotherms curves allowed the calculation of the distribution coefficient (K_d). Then, the experimental K_d values were compared with those presented in literature, in order to evaluate the influence of the soil characteristics as organic matter and clay minerals, among others. Mono contaminant solutions were used, although values determined from competitive assays are common in literature. For a better understanding of the sorption equilibrium, other isotherm models like Langmuir or Freundlich were fitted to the experimental data.